Remarks

The Applicant respectfully requests reconsideration of this application in view of the following remarks. In this response, no claims have been amended, cancelled or added. Hence, claims 1-2, 4-8 and 21-34 remain pending for reconsideration.

The undersigned acknowledges with thanks (i) the Examiner's withdrawal of the previous rejection of claim 1 under 35 U.S.C. §112, second paragraph; and (ii) the Examiner's approval of the corrected drawing sheets.

Because the Examiner continues to attribute to US Patent No. 6,674,756 of Rao et al. features and functionality that are simply not reasonably taught or suggested, a Notice of Appeal is concurrently submitted herewith.

Claim Rejections – 35 U.S.C. §102
US Patent No. 6,674,756 of Rao et al.

In the Final Office Action, the Examiner rejected claims 1-2, 4-9, 25-29 and 34 under 35 U.S.C. §102(e) for allegedly being anticipated by US Patent No. 6,674,756 of Rao et al. (hereafter "**Rao**"). The undersigned respectfully disagrees with the Examiner's characterization of the teachings and/or applicability of Rao to the claims and points out below several distinctions between the claimed subject matter and the teachings of Rao.

As presently understood by the undersigned, Rao generally relates to a physical network switch that may be partitioned into multiple virtual routers among which switch resources may be flexibly and dynamically allocated (see Abstract).

Briefly and by way of background, various embodiments of the present invention involve the use of a network operating system (NOS) executing on each of a plurality of processor elements (PEs) of a switch. In embodiments of the present invention, ***objects represent a basic unit of management*** for purposes of fault tolerance, computational load balancing, etc. (see paragraph [0059]). The NOS supports the creation and dynamic distribution of discrete customized services for multiple customers of a service provider operating the switch by providing each customer with a customized configuration of service object groups. Internet Protocol (IP) services, such as network-

based managed firewall services and virtual private network (VPN) services, and associated network resources can be represented by customized object groups.

The NOS, via an Object Manager (OM) 24, including: (i) an Object Manager Object Routing and Interface (OMORI) layer 44 on each processor element (PE) of the switch 12 to manage objects local to the PE; and (ii) an Object Manager Object Routing and Interface Global (OMRIG) layer 42 executing on a processor element on which the system virtual router resides, manages global object groups, manages global object configurations, manages local objects and provides object communication services between objects in the same address space and objects in different address spaces (see Fig. 3, Fig. 4, Fig. 10 and the descriptions relating thereto).

Regarding independent claim 1, the undersigned respectfully submits <u>Rao</u> lacks teaching of the particular mechanisms and steps through which discrete customized services are provided to each customer of a service provider operating a switch performing the recited method. For example, claim 1 requires a ***network operating system (NOS)***, running on a plurality of processor elements (PEs) of a switch, to allow the switch to "create discrete customized services for customers ... by providing each customer with a ***customized configuration of service object groups***" (emphasis added). The Examiner cites to col. 8, line 38 to col. 9, line 43 of <u>Rao</u> to support his position that <u>Rao</u> meets these limitations; however, this portion of <u>Rao</u> merely includes a discussion relating to the connection manager 46, resource manager 38 and IP forwarder 44 of Fig. 2 and the flow diagram of Fig. 3. Firstly, ***Rao makes no mention of an operating system*** anywhere in the specification or claims. Consequently, how the Examiner is able to attribute certain functionality to an unmentioned component (i.e., an operating system) in <u>Rao</u> is beyond the undersigned's understanding. ***For purposes of facilitating resolution of issues on appeal, the undersigned respectfully submits it would be helpful if the Examiner would identify the component or components in <u>Rao</u> that he considers equivalent to the recited NOS.*** For example, is the Examiner equating the NOS recited in claim 1 with the fault tolerant application manager (FTAM) 36 of <u>Rao</u>, the resource manager 38 of <u>Rao</u> or some combination of components including one or both of the FTAM 36 and/or the resource manager 38? To the extent the Examiner continues to rely on the inherency argument asserted in the Office action mailed July 6, 2006 (i.e., an

operating system is an "inherent feature on computers"), is it the Examiner's position that this inherent feature also inherently allows the switch to create discrete customized services for customers of a service provider operating the switch _**by providing each customer with a customized configuration of service object groups**_ as required by claim 1?

With respect to the resource manager 38 of Rao, it is described as performing the functions of managing and allocating local resources, such as digital modem and ISDN switch resources; however, there is no indication in Rao that the resource manager 38 or the network switch as a whole for that matter creates discrete customized services by providing customers with customized configurations of service object groups. For the Examiner's convenience, the undersigned points out conceptual illustrations of object groups are depicted in Figs 4 and 5 in the above-captioned patent application. Finally, other than Rao's port interface (PIF) object 122, the undersigned can find no mention of objects, object groups, service object groups or object managers. For at least these reasons, the distributed object management functionality and support for same by a NOS on each PE of a switch as recited by claim 1 is not thought to be taught or reasonably suggested by Rao.

In the Final Office action, the Examiner continues to assert "establishing a global object manager associated with the NOS of the first PE, the global object manager being responsible for managing global object groups and global object configurations" as recited in claim 1 is taught by Rao in col. 19, lines 39-43. However, as pointed out in the Amendment and Response filed November 6, 2006, the relied upon portion of Rao merely states:

> According to one embodiment of the invention, a default system router is created at system boot-up. This router is preferably always present in the system, and all resources initially belong to the system router until they are reassigned to the VRs.

The undersigned respectfully submits that neither the above-quoted portion of Rao nor other portions of Rao based on the undersigned's current understanding teach or reasonably suggest the expressly recited limitations of "establishing a global object manager associated with the NOS of the first PE, the global

object manager being responsible for managing global object groups and global object configurations." For at least this additional reason, claim 1, is thought to be distinguishable over Rao.

In the Final Office Action the Examiner continues to rely on col. 8, lines 38-55 of Rao for teaching establishing a local object manager on each PE. The undersigned again respectfully submits the cited portion of Rao relates to a connection manager 46 and a resource manager 38 of each forwarding module (FM) 10. According to the passage of Rao relied upon by the Examiner, the connection manager detects incoming calls to the FM and the resource manager manages and allocates local resources to the incoming call. Claim 1, as amended, requires "establishing, via the global object manager, a local object manager on each of the PEs, wherein the local object manager for a given PE of the plurality of PEs *manages objects local to the given PE and transfers messages between objects* on the given PE and between objects on the given PE and objects on other PEs of the plurality of PEs" (emphasis added). To the extent the Examiner is equating the recited "local object manager" with either the resource manager or the connection manager of Rao, the undersigned respectfully disagrees. Neither Rao's resource manager nor Rao's connection manager purport to perform the functions attributed to the recited "local object manager." For at least this additional reason, claim 1, is thought to be distinguishable over the teachings of Rao.

In summary, claim 1, as amended, and its dependent claims, which add further limitations, are thought to be patentably distinguishable over Rao as a result of Rao's lack of teaching or suggestion regarding at least (i) a network operating system (NOS) on each of a plurality of PEs of a switch supporting the creation of discrete customized services for customers of a service provider operating the switch **by providing each customer with a customized configuration of service object groups**; (ii) a global object manager as recited; and (iii) local object managers established on each of the PEs as recited. For at least these reasons, the undersigned respectfully requests the Examiner to withdrawal the rejections regarding claims 1, 2 and 4-8.

Regarding independent claim 25, it includes limitations similar to those discussed above with reference to claim 1. Consequently, claim 25 and its dependent claims, 26-34, are thought to be distinguishable for at least the reasons presented above.

Claim Rejections – 35 U.S.C. §103
Rao in view of US Patent No. 7,096,495 of Warrier et al.

In the Final Office Action, the Examiner rejected claims 21-24 and 30-33 under 35 U.S.C. §103 for allegedly being unpatentable over Rao in view of US Patent No. 7,096,495 of Warrier et al (hereafter "**Warrier**"). The Examiner appears to rely on Warrier solely for its teachings regarding firewall services. The undersigned acknowledges that Warrier uses the term "firewall;" however, Warrier does not address the numerous other deficiencies of Rao pointed out above with reference to claim 1. Consequently, despite the addition of Warrier to the rejection, claims 21-24 and 30-33 remain distinguishable over the combination of Rao and Warrier for at least the reasons discussed above.

Conclusion

The undersigned respectfully submits that the remarks presented herein have overcome the rejections and that the pending claims are in condition for allowance. Accordingly, the undersigned requests that the rejections be withdrawn and that a Notice of Allowance be promptly issued for claims 1-2, 4-8 and 21-34.

Request for a Telephone Interview

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-856-7155.

Respectfully submitted,

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